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ABSTRACT

This brief Kids Count report looks at major problems, available data, and some solutions for Montana's children as passengers in and drivers of vehicles on Montana's roads and highways. The report also presents information about adults' roles and responsibilities for preventing traffic accidents and protecting children. Facts presented in the report include: (1) motor vehicle crashes are the leading cause of death for Montana children from age 1 to 15; (2) if a driver is unbuckled, 70 percent of the time children riding in that car are also unbuckled; and (3) use of seat belts on all roads in Montana was 72.6 percent in 1997. The report discusses proper use of vehicle restraints with infants and children, the Montana Child Occupant Protection Training Program, and sources of further information. (EV)

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montana kids count

Montana Special Report

1999 Report # 1

# A Report on Traffic Safety and Montana's Children

*This report looks at major problems, available data, and some solutions for Montana's children as passengers in and drivers of vehicles on Montana's roads and highways. It presents information about adult's roles and responsibilities for protecting their "precious cargo".*

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## The Problems

- Motor vehicles crashes are the **LEADING CAUSE** of death for Montana children from 1 to 15 years old.
- In Montana during 1997 (the latest year for which complete data is available) one child was killed and an additional 90 children injured **EACH MONTH** in a motor crash.
- In 1997, nearly 21% of all children under 15 years old killed in crashes nationwide were killed in alcohol-related crashes. **In MONTANA, this percentage was slightly higher at 23%.**
- The behavior of unbuckled adults directly affects Montana children. When a driver is unbuckled, **70% of the time, children riding in that car are unbuckled!**
- Accidents rank first for Montanans when determining potential years of life lost (PYLL), while being the fifth leading cause of death in Montana.

In 1997, there were a total of 41,967 traffic fatalities in the United States. The 0-14 age group accounted for 6 percent (2,658) of those traffic fatalities. **In Montana, the 0-14 age group accounted for 4.9% of all traffic fatalities in the state during 1997.**

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**Special report April 1999**

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For more information contact HMHB in Helena, Montana at (406) 449-8611.

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# The Facts

## 1. Children Are At Risk

Children are placed at increased risk of death or injury while they are passengers in motor vehicles by:

- Drivers who have been drinking. ANY blood alcohol concentration (BAC) places both the child and driver at risk.
- Not being properly secured in appropriate child vehicle restraints.
- Child restraints not being properly attached to or secured in the vehicle.
- Children refusing to wear child restraints or unbuckling them during travel.
- Parents or other caregivers, including older siblings and grandparents, who are not "role models", i.e., non-seatbelt users.
- Anyone who rides LOOSE (unbelted). One estimate is that unbelted passengers cause 22% of injuries to other passengers and hurt those who are buckled up by being thrown against them.
- Other non-secured items that might fly around at the time of impact, e.g., groceries, toys.

***If all children under 5 years of age had been protected by child safety seats, nationally an estimated 495 lives could have been saved in 1997.***

## 2. Seat Belts Save Lives

From national data, we know that from 1975 through 1997, an estimated 3,894 lives were saved by the use of child restraints (child safety belts or adult belts). In 1997, an estimated 312 children under age 5 were saved as a result of child restraint use.
If all children under 5 years of age had been protected by child safety seats, nationally an estimated 495 lives (an additional 183 children) could have been saved in 1997.

## The Use of Child Safety Seats And Seat Belts *Decreases* With Age Throughout Childhood

Seat belt use in Montana is good overall. Use of seat belts on all roads (interstate, primary, city, and other) has increased from 59.5% in 1988 to 72.6% in 1997. Seat belt use on the Interstate system is highest at 87.9%. Use in cities and on "other" roads drops to 52.4% and 60.2% respectively, so clearly there is work to do.

For children, the data are disturbing as the child increases in age. The good news is that as children become adults, their use of seat belts improves.

- During 1997, nationally, 9,069 children under 15 years of age were involved in fatal crashes. For those children where restraint use was known, 46 percent were unrestrained; among those who were fatally injured, 63 percent were unrestrained.



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- 85.2% of parents were observed transporting their newborn or infant in an infant seat properly positioned within the vehicle.
- 60.1% of children between 1 and 4 years were transported in a child restraint. Use of restraints was highest in suburban areas and lowest in rural areas.

The Centers for Disease Control and Prevention Youth Risk Behavior Survey conducted in 1995 asked 9th and 12th grade students in Montana a series of questions regarding personal safety and protection while riding motorcycles, bicycles, or while riding in or driving a motor vehicle. Because the results were weighted for Montana, they can be generalized. Seat belt use was reported as follows:

**Table 1. Percentage of Montana High School Students Reporting They "Rarely or Never" Use Seatbelts, 1995**

| | |
|---|---|
| **Total** | 31.9% |
| Females | 24.5 |
| Males | 38.7% |

***In 1997, injuries to young children accounted for 10% of all traffic injuries at both the state and national level.***

## 4. Fatalities and Injuries In Montana Compare To National Data

As shown in Figure 1 below, Montana's traffic fatalities and injuries among children under 15 years are similar to national data. In 1997, Montana experienced fewer overall traffic fatalities, but slightly higher **occupant** fatalities. Injuries to young children accounted for 10% of all traffic injuries at both the state and national level.

**Table 2. Traffic Fatalities and Injuries Among Children 0-14 Years Old by Outcome, 1997, Montana and United States**

| Type of Traffic Crash Outcome | Montana | | United States | |
|---|---|---|---|---|
| | Number | Percent | Number | Percent |
| All Traffic Fatalities | **265** | 100 % | 41,967 | 100 % |
| FATALITIES AND INJURIES TO CHILDREN AGED 0–14 | | | | |
| All Traffic Fatalities | 13 | 4.9 % | 2,656 | 6.3 %* |
| Occupant Fatalities | 12 | 4.5 % | 1,791 | 4.3 %* |
| Traffic Injuries | 1080 | 10.0 % | 331,000 | 10.0 %* |

**Percent of Total*

Using a 10-year study period, national and Montana data show similar percentages of children 0-4 years dying in traffic accidents, while the number of older children who died (5-9 years and 10-14 years) are less for Montana.

**Table 3. Total Traffic Fatalities Among Children 0-14 Years Old by Age Group, 1988 - 1997, Montana and United States**

| Age Group of Children Who Died | Montana | | United States | |
|---|---|---|---|---|
| | Number | Percent | Number | Percent |
| 0-4 Years | 47 | 2.3 | 9,042 | 2.1 |
| 5 - 9 Years | 32 | 1.6 | 9,041 | 2.1 |
| 10 - 14 Years | 41 | 2.0 | 12,689 | 3.0 |
| **Total** | **120** | **5.9** | **30,772** | **7.2** |

Rausch, Sanddal, et. al, further studied a segment of the above cited time period and looked at all deaths involving individuals under age 15 in Montana for the 3-year period from 10/1/89 through 9/30/92. Their findings:

> *Injury deaths from motor vehicles were the number one death mechanism for children. Eighty-nine (89%) percent of motor vehicle crash occupants who died were not restrained at the time of death. Of the 121 deaths to children during that time period, 21 or 24% were due to motor vehicle crashes.*

## Montana Has Seatbelt and Child Safety Restraint Laws

***89% percent of motor vehicle crash occupants who died were not restrained at the time of death.***

1 61-9-420 Child safety restraint systems - standards – exemptions.
If a child under 2 years of age is a passenger in a motor vehicle, that motor vehicle must be equipped with one child restraint for each child in the vehicle and each child must be properly restrained.

2 A child between 2 and 4 years of age or weighing less than 40 pounds who is a passenger in a motor vehicle must be properly restrained in a safety belt that meets applicable federal motor vehicle safety standards.

3 The Department [of Transportation] shall by rule establish standards in compliance with 61-9-419 through 61-9-423 and applicable federal standards for approved typed of child safety restraint systems purchased after January 1, 1984.

4 A person is not required to have more than three child safety restraint systems in a vehicle.

5 The department may by rule exempt for the requirement of subsection (1) a child who because of a physical or medical condition or body size cannot be

### DATA NOTES AND SOURCES


**1997 Montana Vital Statistics**, Montana Department of Public Health and Human Services, DPHHS, November 1998.

**Traffic Safety Facts, 1997** – Children, U. S. Department of Transportation, National Highway Traffic Safety Administration (NHTSA), National Center for Statistics and Analysis, Washington, DC.

**Traffic Safety Bureau**, Montana Department of Transportation, Helena, MT.

**NHTSA Traffic Safety Facts, 1997** – Children, based on the National Occupant Protection Use Survey, 1996.

**Centers for Disease Control & Prevention**. CDC Survey Summaries, September 27, 1996. MMWR, 1996; 45 [No. SS - 4].

**Pediatric Emergency Care, in press, 1998** "Changing Epidemiology of Injury Related Pediatric Mortality in a Rural State: Implications for Injury Control," Rausch, TK, Sanddal, ND, Sanddal, TL, and Esposito, TJ, .

**Montana Code Annotated.**

**U. S. Department of Transportation**, National Highway Traffic Safety Administration, Technical Report, "Analysis of Ejection in Fatal Crashes", Washington, D.C., November 1997.

**Montana's Child Occupant Protection Project,** Healthy Mothers, Healthy Babies: The Montana Coalition, Helena, MT.


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# Some Solutions

## 1. Seat Belts and Child Safety Seats Work

Lap/shoulder safety belts, when used, reduce the **risk of fatal injury** to front seat occupants (age 5 years and older) of passenger cars by 45 percent and the risk of moderate to critical injury by 50 percent.

Child safety seats reduce the risk of fatal injury by 69 percent for infants (less than 1 year old) and by 47 percent for toddlers (ages 1 – 4 years).

For light truck occupants, safety belts reduce the risk of fatal injury by 60 percent and the risk of moderate to critical injury by 65 percent. The most severe consequences occur when the vehicle passenger is ejected or thrown from the vehicle. As shown in Figure 3 below, the use of safety belts dramatically changes the probability of ejection in a crash.

Table 4. Probability of Ejection from Vehicle During Crash — Belted and Unbelted

| | Probability of Ejection by Seat Belt Use | |
|---|---|---|
| | **Ejected** | **Not Ejected** |
| Belted | 2.49% | 97.51% |
| Unbelted | 29.43% | 70.57% |

***Infants must ride facing the REAR of the car. The infant's head and back are cushioned in this position***

## Having Children Properly Positioned Saves Lives

- Infants must ride facing the REAR of the car. The infant's head and back are cushioned in this position. Even in the back seat, DO NOT turn the baby to face forward until he or she is over one year of age and weighs at least 20 pounds.
- Under no circumstances should children in rear-facing child seats be placed in the front seat of vehicles equipped with passenger side airbags.
- Back seats are usually safer than front seats for children age 12 and under. Head-on crashes are the most serious and the most common kind. The impact of a deploying air bag could result in injury or death to a child.
- Keep your child in a safety seat or booster as long as possible, at least until he or she weighs 40 pounds. Then use an auto booster seat that makes vehicle belts fit better. A booster seat used with lap and shoulder belts is preferred.
- When a child is about 80 pounds and 4'6" tall, he or she will appropriately fit in a lap/shoulder belt. He should be tall enough to sit without slouching, with his knees bent at the edge of the seat. The lap belt must fit low and tight across the thighs.
  Each person must have his own belt. Buckling two people, even children, into one belt could injure both.
- Under no circumstances should a child (or anyone) ride in a pickup box or the cargo area of a van or station wagon!

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- NEVER hold a child on your lap. You could crush him in a collision. Even if you use a safety belt, the child would be torn from your arms in a crash.
- If there is no room in back (or no back seat, as in some pickups) and you have no other choice, a child over age one and weighing at least 20 pounds may have to ride in front. Make sure the child is correctly buckled in a forward-facing safety seat.
- Try to have a safety seat for each vehicle in which your child will be transported. Moving seats from one vehicle to another is time consuming and often results in an otherwise safe seat being improperly secured.
- Follow manufacturer's instructions for securing your safety seat in your vehicle. Have your safety seats checked regularly to be sure they continue to provide the best protection for your child.

***When a driver is unbuckled, 70% of the time, children riding in the car are unbuckled***

## Consider Policy Changes

Strengthen standard seat belt laws — the behavior of unbuckled adults directly affects children. When a driver is unbuckled, 70% of the time, children riding in that car are unbuckled.

Establish graduated driver's licensing for adolescent drivers. For the years 1994 - 1996, Montana teens under the age of 16 had a fatal crash rate of 99 per 1,000 licensed drivers, meaning that 1 out of every 1,000 young drivers died while operating a motor vehicle. In addition, 40% of these fatal crashes occurred at night.

## Montana Child Occupant Protection Training Program

- The Montana Traffic Safety Bureau periodically offers 2-day training on the basics of child occupant protection. Programs are taught by certified instructors and offer the following:
- Information on how to prevent or minimize injury to children riding in a vehicle and the various types of restraints available for children.
- The consequences of child seat misuse and how to install a child seat correctly. A $100 stipend to help offset the cost of attending a 2-day training.
- Successful completion of the training allows a participant to apply for the more advanced 4-day NHTSA (National Highway Traffic Safety Administration) Standardized Child Passenger Safety Training Course with the potential to become a certified instructor.
  The Standardized course is ideal for advocates currently working in child passenger safety or who anticipate future involvement and need more technical detail to become a proficient trainer.
- Qualified applicants are offered a $100 stipend to offset the cost of attending a NHTSA Standardized Course.
- Those who successfully complete the Standardized course are offered information about how to qualify for a $1,000 grant to use for a community-based child occupant protection program.

# Where Can I Get Further Information?

- Call 1-800-421-6667, the Healthy Mothers, Healthy Babies Toll Free Information Line, to speak with someone about *MONTANA'S SAFE KIDS* Occupant Protection Project *(COPP)*.
- You can also to receive a packet of information including *Precious Cargo: Protecting the Children Who Ride With You.* This publication describes safety restraint systems, illustrates how safety belts, child restraints, and airbags work, and offers important information to help you select the correct child restraint.
- Information about child restraints is readily available from most motor vehicle manufacturers. The COPP packet includes telephone numbers for most automobile manufacturers.
- A summary of Montana's Seatbelt and Child Safety Restraint Laws is available from the COPP and from the Montana Department of Transportation.
- The Montana Department of Transportation through the Traffic Safety Bureau periodically offers 2-day training on the basics of child occupant protection. Successful completion of a 2-day course allows a participant to apply for the more advanced 4-day NHTSA (National Highway Traffic Safety Administration) Standardized Child Passenger Safety Course, with the potential to become a certified instructor. Contact Priscilla Sinclair at 406/444-7417 for further information.
- The Emergency Medical Services Section of the Health Systems Bureau, DPHHS, administers the state trauma register and is gathering information regarding seat belt use during crashes, injuries sustained, and other data. Linkage of data will provide valuable information for policy use. Contact Emergency Medical Services at 406/444-3895.
- The Department of Public Health and Human Services conducts ongoing studies of Montanans' health and risk-taking behaviors. Results of these studies are available and used regularly to respond to questions and help form public policy. Contact the Health Systems Bureau at 406/444-4488.
- The Critical Illness and Trauma Foundation, located in Bozeman, is a private nonprofit organization committed to improving rural emergency and health promotion. Founded in 1986, the organization works to meet the need for high quality emergency care in Montana and other rural areas. Contact the Foundation at 406/585-2659.

***Call 1-800-421-6667, the Healthy Mothers, Healthy Babies Toll Free Information Line, to speak with someone about Montana's SAFE KIDS Occupant Protection Project***

# Resources On The World Wide Webb

The following Traffic Safety/Public Health Injury Prevention Resources on the World Wide Web were prepared by Children's Safety Network.

- **Bike Helmet Safety Institute** ***www.bhsi.org*** is a comprehensive site for bicycle helment information of all kinds
- **Building Safe Communities** ***www.edc.org/HHD/csn/bsc*** has a fulltext bimonthly newsletter, along with links to other traffic safety and public health publications
- **Child Passenger Safety Web** ***www.childsafety.org/index.html*** provides information on car seats, recalls, training, and more
- **Children's Safety Network** ***www.edc.org/HHD/csn*** provides information on injury and violence preventions; links to many other sites, including Who's Who in Traffic Safety
- **Healthy Mothers, Healthy Babies, The Montana Coaltion** ***www.hmhb-mt.org*** provides comprehensive information on children's health and safety issues
- **Maternal and Child Health Bureau** ***www.os.dhhs.gov/hrsa/mchb*** has publications on child passenger safety for out-of-home child care settings
- ***National Highway Traffic Safety Administration www.nhtsa.dot.gov*** provides materials for professionals and consumers, FARS data, and much more
- **National Safe Kids Campaign** ***www.safekids.org*** features materials for parents and children on child passenger, bicycle and pedestrian safety
- **Systematic Reviews of Childhood Injury Prevention Interventions //** ***weber.u.washington.edu/~hiprc/childinjury*** contains reviews of bicycle helmet studies and child pedestrian studies
- **Who's Who in Traffic Safety** ***www.edc.org/HHD/csn/buildbridges/whoswho*** is a continuously updated directory of organizations, state and federal agencies, and



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